



CNOOC Limited
中国海洋石油有限公司

HEALTH, SAFETY AND ENVIRONMENT HANDBOOK





CNOOC Limited is the largest producer of offshore oil & gas in China and is one of the largest oil & gas exploration and production companies in the world. As a subsidiary of the China National Offshore Oil Corporation (CNOOC), CNOOC Limited adheres to and implements CNOOC's HSE Philosophy.

Message from CEO



Dear Colleagues,

The purpose of this handbook is to emphasize CNOOC's safety culture. Nothing is important if we cannot provide a safe work site and protect the environment where we live. I hope everyone keeps "5 DON'Ts until DOs" in mind at all times during their work. Always remember that everyone is supported to STOP WORK immediately if there is any unsafe environment. We take people as the finest priority in our business, and we believe that through our efforts all accidents can be prevented.

Health, safety and environmental protection are critical components of our corporate culture, and also are the cornerstone for our company's sustainable growth. The Company is dedicated to pursuing the harmonious synergy between corporation and society as well as between humans and nature. As a responsible company, we will continue to maintain transparency and high standards of corporate governance with the commitment to make timely disclosures and to accept public scrutiny with humility.

Over the years, and with great diligence, we have achieved an outstanding track record in the areas of health, safety and environmental protection. However, in the oil industry great challenges always lie ahead. We will continue to work together to create a better tomorrow. Only with your support and contribution can we make it work.

Li Fan Rong
Chief Executive Officer

A stylized, handwritten signature in black ink, consisting of several bold, sweeping strokes.

CNOOC HSE Philosophy

To achieve CNOOC's strategic goal of sustainable development, CNOOC strives for clean and safe developments. Our HSE philosophy is:

- Sound HSE performance is one of the foundations for the company's growth and development.
- Ensuring economic returns, HSE management is also our commitment to social responsibility.
- Put people first and regard employees as our most valuable resource and asset.
- With set objectives, implementation is important.
- Conduct systematic management and continuous improvement with motto "We can always do it better".
- Promote the "5 Don'ts until Dos" Safety Rules, focus on details, and manage risks at acceptable levels.
- Manage contractors and share information and experience to achieve Win-Win cooperation.
- Endeavor to use clean & harmless materials and energy, and protect the environment & natural resources.
- Comply with laws, regulations and industrial standards, and strive for HSE excellence.
- HSE performance mirrors the comprehensive quality of the company.

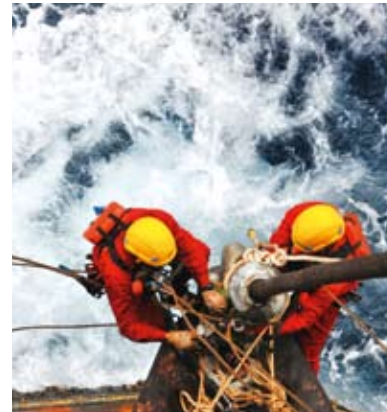




The “5 DON'Ts until DOs” Safety Rules in Workplace

Throughout the whole CNOOC, the following “5 Don'ts until Dos” safety rules apply to ALL activities:

- Don't act until safety risks are clearly assessed.
- Don't act until safety measures are fully prepared.
- Don't act until safety tools are ready for the job.
- Don't act until safety conditions are secured.
- Don't act until safety skills are well obtained.





10 High Risk Activities

CNOOC has identified the following 10 activities as high risk and therefore requiring a high level of HSE consideration and evaluation:

1. Equipment maintenance operation
2. Electrical operation
3. Hot work
4. Confined space entry operation
5. Excavation operation
6. Lifting operation
7. Working at heights
8. Hazardous materials handling
9. Land transportation
10. Simultaneous operation

1. Equipment maintenance operation

- Risk assessments, maintenance plans and safety measures shall be prepared for on-line equipment maintenance.
- Proper measures shall be taken such as isolation, pressure-releasing and displacement.
- Maintenance workers shall be competent and qualified. The proper tools and PPE shall be supplied to every worker.
- PTW must be approved before on-line equipment maintenance.



2. Electrical operation

- Electrical power shall be cut off during all cable and electrical equipment maintenance, and isolation, lockout/tagout and safety caution signs shall be used during all maintenance activities.
- Electrical equipment shall be discharged and disconnected. It is prohibited to touch any high-voltage on-line electrical equipment.
- A specially-assigned, fully qualified person must supervise the maintenance of electrical equipment.
- Power shall not be resumed to the equipment being maintained unless it has been confirmed that no one is working on the subject equipment.
- Electricians shall be trained and certified.
- Insulation protective articles and tools shall be properly used.
- PTW must be approved before electrical operation.

3.

Hot work

- Hot work areas shall be isolated from the production system.
- Cleaning and purging with inert gas shall be carried out before hot work on equipment or pipes containing potentially explosive gases.
- Before hot work begins, clean out combustible material around the work area and restrict the spark splash.
- Flammable gas shall be detected on time in the hot work process.
- The fire watcher shall be present at all times and equipped with sufficient firefighting equipment and material for the hot work activities.
- PTW must be approved before hot work.



4.

Confined space entry operation



- Before entering a confined space, all affected energy sources shall be isolated, locked out and tagged out. The work of displacing, purging, ventilation, and gas detection for the confined space shall be conducted prior to entering the space.
- Ensure all workers are competent and qualified for their assigned positions.
- The number of people entering the confined space shall be strictly controlled. All persons must wear suitable PPE.
- When workers are inside the confined space, at least one watchman shall be on standby at all times outside the confined space with emergency rescue equipment.
- PTW must be approved before entering the confined space.

5. Excavation operation



- A safety plan shall be prepared for excavating operations such as excavating, tunneling, drilling, piling and blasting in the work area.
- All underground pipes, cables, and other hazards must be verified, marked, and isolated if needed before excavation operation.
- Whenever depth of excavation is over 2 meters, work shall follow the confined space entry procedure in addition to excavation precautions.
- Take measures to control landslide and prevent collapse by systemic supporting, releasing slope and footstep.
- Barricade and clear safety caution signs shall be installed around the excavating operation.
- PTW must be approved before excavating operation.



6. Lifting operation

- Lifting risk assessment shall be prepared before all lifting operations. A work plan shall be prepared for all heavy lifting operations.
- Wire, slings and shackles shall be inspected by competent personnel before a lifting operation takes place.
- Lifting devices and equipment shall be validated by inspection certification by a qualified third party. The safety device of the lifting equipment shall be inspected before a lifting operation and determined to be functioning properly.
- A load shall not overload the SWL of the lifting equipment in either the dynamic and/or static condition.
- A designated safety caution area shall be established around a lifting operation; no one shall be under the lifting load or lifting boom at any time.
- All workers who are involved in a lifting operation shall be trained and certified (licensed) for such work.

7. Working at heights

- When working at heights over 2 meters with a fall hazard, fall protection equipment must be used.
- Qualified full body harness and other fall protection devices shall be provided to all workers working at heights.
- Designate and assure a standby person is in place when working at heights.
- Workers must be competent for their assigned positions. People with height restrictions shall not work at heights.
- Simultaneous operations for working at heights in vertical direction shall not be carried out unless segregation measures have been taken properly in the working area.
- Working at heights is prohibited in the case of bad weather conditions.



8. Hazardous materials handling

- Clear safety caution signs must be posted in the working area where the hazardous materials are in use.
- Safety equipment and measures, such as ventilation, fire prevention, explosion prevention, toxic prevention, monitoring, alarm, lowering of temperature, moisture prevention, lightning-protection, electrostatic prevention and isolation shall be implemented according to the properties of the hazardous materials during production, storage and operation.
- Prevention measures shall be taken to avoid the leaking, colliding, dragging and dumping of the hazardous materials during transporting, loading and unloading.
- Operators must be trained and mastered in the skill of using MSDS and suitable PPE.

9. Land transportation

- Regular vehicle testing and checking before driving to ensure a vehicle is in good working condition.
- Drivers must be trained and must hold the appropriate license to operate a vehicle.
- Vehicle occupant limit enforced; never driving with an overloaded vehicle or drive a vehicle over the posted speed limit.
- Safety belt shall be used in all vehicles by both the driver and any other occupants.
- Mobile phone and intercommunication telephone shall not be used during the driving of a vehicle.
- Encourage applying *OGP Land Transportation Safety Recommended Practice*.



10. Simultaneous operation

- In addition to any safety requirements related to special operations, the relevant parties shall be notified of any potential impact caused by a simultaneous operation.
- Relevant parties shall conduct an overall safety assessment related to the interaction of simultaneous operations and shall take all recommended effective control measures.
- A coordinator shall be appointed and shall maintain adequate communication during the whole operation.
- Relevant parties shall develop a coordinated emergency plan before simultaneous operation.
- Where and when possible, avoid simultaneous operation.



CNOOC Limited, as the membership of OGP and IPIECA, is integrating the good international industrial practice into our operation.

